THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte DANIEL A. BORS and WILLIAM D. EMMONS

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Appeal No. 95-0365
Application 07/921,537[1]

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ON BRIEF

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Before JOHN D. SMITH, WEIFFENBACH and ELLIS, **Administrative Patent Judges**.

ELLIS, **Administrative Patent Judge**.

DECISION ON APPEAL

This is an appeal from the examiner's final rejection of claims 1 through 9, all the claims pending in the application.

Claims 1 and 7 are illustrative of the subject matter on appeal and read as follows:

[1] Application for patent filed July 29, 1992.

1. A shelf stable, air-curing composition comprising an acetoacetate functional polymer and a polyformaldehyde chain endblocked with autoxidizable end groups, said polyformaldehyde chain having from 1 to 14 formaldehyde units and being liquid and soluble in the acetoacetate polymer, stored in the absence of atmospheric oxygen.

7. The composition of Claim 1 wherein the acetoacetate functionality on the polymer is reversibly converted to enamine for storage, using ammonia or volatile amine.

The references relied on by the examiner are:

Gresham et al.	(Gresham)	2,449,469	Nov. 2, 1944
Bors et al.	(Bors)	4,960,924	Oct. 2, 1990

The claims are rejected as follows:

I. Claims 1 through 7 are rejected under 35 U.S.C. § 112, first paragraph, as the disclosure is only enabling for claims limited to compositions containing a metal drier.

II. Claims 1 through 6, 8 and 9 are rejected under 35 U.S.C. § 103 as being unpatentable over Bors in view of Gresham and Huyser.

We have carefully considered the entire record which includes, ***inter alia***, the specification, the appellants' Brief (Paper No. 12) and the examiner's Answer (Paper No. 13). We agree with the examiner that the specification is enabling only

for compositions which comprise a metal drier and, therefore, we **affirm** Rejection I. However, we agree with the appellants' that the claimed invention is not obvious over the applied prior and we **reverse** Rejection II.

The claimed invention is directed to an air-curing composition which comprises an acetoacetate functional polymer and an end-blocked polyformaldehyde chain. The polyformaldehyde becomes functional only when the end-blocking group is removed. According to the specification the present compositions "provide a delayed cure mechanism which can be used to prepare coating compositions having a range of desired properties." Specification, p. 2, para. 1.

Rejection I

The examiner urges that the specification disclosure is only enabling for compositions which contain a metal drier. Paper No. 5, p. 2, para. 1. To support his position, the examiner relies on a statement in the specification that "[t]he autoxidation process will take place without drier but it is impractically slow, particularly at room temperature." Specification, p. 12,

para. 3. We agree. It is well established that to satisfy the enablement requirement of 35 U.S.C. § 112, first paragraph, the specification must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation. ***PPG Indus. Inc., v. Guardian Indus. Corp.***, 75 F.3d 1558, 1564, 37 USPQ2d 1618, 1623 (Fed. Cir. 1996); ***In re Wright***, 999 F.2d 1557, 1561, 27 USPQ2d 1510, 1513; ***In re Vaeck***, 947 F.2d 488, 495-96, 20 USPQ2d 1438, 1444-45 (Fed. Cir. 1991). In the case before us, we do not find any guidance or teachings in the specification as to how to make and use the claimed compositions without the presence of a metal drier. In fact, to the contrary, the referenced sentence from p. 12 of the specification explicitly states that without drier the autoxidation process is so slow that it has no practical use. ***Cf. Brenner v. Manson*** 383 U.S. 519, 534-35 (1966) ("The basic quid pro quo contemplated by the Constitution and the Congress for granting a patent monopoly is the benefit derived by the public from an invention with substantial utility. Unless and until a process is refined and developed to this point-- where specific benefit exists in currently available form-- there is insufficient justification for permitting an applicant to engross [in] what may prove to be a broad field").

The appellants contend that those skilled in the art would understand the referenced statement to mean that "if the reaction rate is important to the selected end use, a composition without metal drier should be cured at elevated temperature." Brief, p. 4, para. 2. We disagree. We find nothing in the referenced sentence which suggests performing the autoxidation reaction at a different temperature, either higher or lower. Although the appellants urge that those skilled in the art would have understood the phrase as suggesting an elevated temperature, they have not provided any evidence which supports that position.

Accordingly, Rejection I is affirmed.

Rejection II

According to the examiner, Bors discloses "polymers having acetoacetate functionality introduced on the chain end by an acetoacetate functional mercaptan." Answer, p. 3. In addition, the examiner states that Gresham describes a method for endcapping formaldehyde polymers with alcohols and that Huyser discloses that the appellants' end groups are autoxidizable. Answer, p. 4. Accordingly, the examiner concludes that

> it would have been obvious to one of ordinary skill in the art that if autoxidizable alcohol endgroups where [sic, were] used in the known method of making end-blocked

> polyformaldehyde chains such as described in Gresham that the formaldehyde functionality in the polyformaldehyde chain would be available for a crosslinking reaction with an acetoacetate polymer functionality when the autoxidizable alcohol end-blocking group was removed. Furthermore, it would have been obvious to one skilled in the art that once these end-groups oxidized, the aqueous formaldehyde would, albeit delayed, proceed to controllably crosslink the acetoacetate functional polymer in the art recognized manner and that until these end-groups oxidized a composition containing same would be shelf-stable [Answer, para. bridging pp. 4-5].

We find this position untenable.

As developed in the appellants' Brief, none of the references teaches or suggests the combination of elements which comprise the claimed composition. Moreover, the examiner has failed to provide any reasons based on the applied prior art, or on the basis of knowledge generally available to one of ordinary skill in the art, as to why the teachings of the references should be combined. Rather, the examiner's overall position is that one of ordinary skill in the art would have understood that aqueous formaldehyde is an excellent crosslinker for acetoactetate polymers and, thus, any modifications to the components of the crosslinking reaction would have been ***prima facie*** obvious. However, in reviewing the references relied on by the examiner is difficult to discern on what basis this conclusion was reached. The examiner has not provided any

reasons why the prior art would have suggested to those of ordinary skill in the art the endblocking of a polyformaldehyde chain with autoxidizable end groups in order to make an air-curing composition which comprises acetoacetate functional groups and said polyformaldehyde chain. On this record, we only find these suggestions in the appellants' specification. Accordingly, we agree with the appellants, that the examiner has relied on impermissible hindsight in making his determination of obviousness. ***In re Fritch***, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992); ***Interconnect Planning Corp. v. Feil***, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985) ("It is impermissible to engage in hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill gaps"). ***W.L. Gore & Associates***, ***Inc.***, 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983), ***cert. denied***, 469 U.S. 851 (1984) ("To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher"). Thus, on this record, we do not find that the examiner has established,

through the use of factual evidence or sound scientific reasoning, that the combined limitations would have been obvious to one of ordinary skill in the art at the time of the present invention.

As a final matter, we point out that we agree with the appellants that the contested statement on p. 1 of the specification[2] identifies a problem in the prior art which the present invention seeks to resolve. We find the examiner's statement on p. 9 of the Answer that "[w]hen one, without knowing how it is going to affect his interests, makes a statement which he later attempts to deny when he finds it against his interests, he will not be believed unless he produces convincing proof of his later assertion," to be unreasonable and unwarranted. We know of no case law which would support this extreme position.

Accordingly, Rejection II is reversed.

The decision of the examiner is affirmed-in-part.

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[2] The specification states "[a]queous formaldehyde is known to be an excellent and rapid crosslinker for acetoacetate polymers and specifically for vinyl emulsion polymers with pendant acetoacetate groups. However, the crosslinking reaction is very fast and is not controllable, so acetoacetate emulsions to which formaldehyde has been added are very poor film formers and are not generally useful in coating compositions." Specification, p. 1., para. 2.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR 1.136(a).

AFFIRMED-IN-PART

JOHN D. SMITH Administrative Patent Judge)	
CAMERON WEIFFENBACH Administrative Patent Judge)	BOARD OF PATENT APPEALS AND INTERFERENCES
JOAN ELLIS Administrative Patent Judge)	

Appeal No. 95-0365
Application 07/921,537

Brian W. Stegman
Rohm and Haas Company
Independence Mall West
Philadelphia, PA 19105

JE/jrg

APPEAL NO. 95-0365 - JUDGE ELLIS

APPLICATION NO. 07/921,537

APJ ELLIS

APJ JOHN SMITH

APJ WEIFFENBACH

DECISION: ***AFFIRMED-IN-PART***

Typed By: Jenine Gillis

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